

# REPORT DOCUMENTATION PAGE

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The symposium "Macromolecular Assemblies for Optical and Electronic Applications" was held at the American Chemical Society National Meeting on August 26 and 28, 2001. The American Chemical Society Division of Polymer Chemistry held in four sessions sponsored it. The themes of the four sessions were Optical Properties (3 sessions) and Macromolecular Assemblies (2 session). The program for the symposium is appended to this report. The symposium consisted of 32 invited papers, including a contribution from 2000 Nobel Laureate in Chemistry Alan J. Heeger, and the sessions were well attended. There was considerable discussion after most of the papers. The symposium was dedicated to the memory of Professor Sukant Tripathy who died in a drowning accident in Hawaii in December 2000.

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## **MACROMOLECULAR ASSEMBLIES FOR OPTICAL AND ELECTRONIC APPLICATIONS**

**The following is the program for this symposium to be held at the ACS National Meeting, August 26-30, 2001, Chicago, Illinois. Abstract numbers are given after the title of each paper.**

### **Sunday, Aug. 26, a.m. Presiding D. J. Sandman and K. J. Wynne**

8:25 Introductory Remarks

8:30 Anthony F. Garito (Univ. of Pennsylvania) "Rare earth-doped polymer optical waveguide amplifiers" 470375

9:00 Jayant Kumar (Univ. of Massachusetts Lowell) "Electroabsorption Spectroscopy of higher order nonlinear susceptibilities in Polymers" 472078

9:30 Warren Herman U. S. Navy NAWCAD, Patuxent, MD) "Optical nonlinearities in chiral polymers" 476706

10:00 Luping Yu (Univ. of Chicago) "Multifunctional organic photorefractive materials-the past and future" 467013

10:30 Paul Rochon (Royal Military College, Kingston, Ontario, Canada) "Photoinduced chirality in azobenzene containing liquid crystal polymers" 469864

11:00 Michael Hanack (Univ. Tübingen, Germany) "Optical limiting properties of indium and titanium phthalocyanines and naphthalocyanines" 466644

11:30 Professor Jerome B. Lando (Case Western Reserve Univ.) "Polymer Optical and Electronic Based Sensors" 468633

### **Sunday, Aug. 26, p.m. Presiding H. Bright, R. Gaudiana**

1:30 Professor Timothy Swager (Massachusetts Institute of Technology) "Polymer Architectures for Sensory and Photonic Applications" 472228

2:00 Professor Richard McCullough (Carnegie Mellon Univ.) "Nanoscale Self-assembly in Highly Conductive Block-copolymers Containing Regioregular Polythiophenes" 471183

2:30 Professor Anthony Guiseppi-Elie (Virginia Commonwealth Univ.) "Detection of DNA hybridization using conductive polymer layers" 467716

3:00 Dr. Gary Blackburn (Motorola Corporation) "Electrochemical Detection of Nucleic Acids on SAMs-constructed Arrays" 470435

3:30 Professor Richard Gregory (Clemson Univ.) "Morphology and micro-structure effects on the optical and electronic properties of conjugated polymeric films" 471473

4:00 Professor Long Y. Chiang (National Taiwan University) "Synthesis of Starburst Hexadecaaniline Derivative of C60 and its Elastic Submicroparticles" 471068

4:30 Professor Uwe Bunz (Univ. of South Carolina) "Oligonucleotide directed assembly of materials" 468707

4:50 Dr. Ashok Cholli (Univ. of Massachusetts Lowell) "A Comparative Study of Chemically and Enzymatically Synthesized Polyaniline by Solid State NMR" 472096

5:10 Dr. Ferdinando Bruno (U. S. Army Natick) "Novel templated polyphenol for ionic Conductivity" 472051

### **Tuesday, Aug. 28, a.m., Presiding J. P. Armistead**

8:30 Professor Alan J. Heeger (Univ. of California, Santa Barbara) "Photophysics of semiconducting polymers" 475354  
9:00 Professor Yang Yang (Univ. of California, Los Angeles) "High performance organic electronic memory cells" 473089  
9:30 Professor James E. Whitten (Univ. of Massachusetts Lowell) "Optical and electronic properties of electron polymerized thiophene films" 470355  
10:00 Professor Mary Galvin (Univ. of Delaware) "Effect of polymer structure on the performance of LEDs" 470174  
10:30 Professor Frank Karasz (Univ. of Massachusetts Amherst) "Polymer electroluminescence: effect of micro structure and morphology" 471434  
11:00 Professor Kenneth Wynne (Virginia Commonwealth Univ.) "Surface tension confined microfluidics" 473354  
11:20 Professor Arthur Watterson (Univ. of Massachusetts Lowell) "Macromolecular aggregation of amphiphilic polymers" 472125  
11:40 Professor Alexandre Blumstein (Univ. of Massachusetts Lowell) "Intercalation polymerization and macromolecular assembly of ethynylpyridine within layered aluminosilicate" 470358

**Tuesday, Aug. 28, p.m., Presiding A. C. Watterson**

1:30 Professor Michael Rubner (Massachusetts Institute of Technology) "Using polyelectrolyte multiplayer assemblies to control surfaces and interfaces" 469256  
2:00 Professor Paula Hammond (Massachusetts Institute of Technology) "2D colloidal arrays on surfaces using patterned polyelectrolyte multilayers" 470392  
2:30 Professor Hachiro Nakanishi (Tohoku Univ. Sendai, Japan) "Preparation and novel optical properties of hybridized nanocrystals of polydiacetylene" 476290  
3:00 Professor Kalle Levon (Polytechnic Univ.) "Macromolecular assembly of conducting polymers via interpolymer complexation" 471299  
3:30 Dr. Leonard J. Buckley (Naval Research Laboratory) "Materials Chemistry at the Naval Research Laboratory" 468650  
4:00 Professor Fotios Papadimitrikopoulos (Univ. of Connecticut) "Non-aqueous layer-by-layer growth of diamine/cadmium selenide nanocrystal based light-emitting diodes" 477621  
4:30 Professor Daniel J. Sandman (Univ. of Massachusetts Lowell) "Macromolecular assemblies with nanoscale dimensions: structural and optical properties of conjugated polymers" 464238  
4:50 Professor Anastasios Angelopoulos (Univ. of Massachusetts Lowell) "Surface and bulk interactions of perfluorosulfonate ionomer membranes with polyelectrolyte solutions for fuel cell miniaturization and optical sensor applications" 471228  
5:10 Professor Gary Wnek (Virginia Commonwealth Univ.) "Sulfonated-styrene based proton exchange membranes" 473765  
Concluding remarks.